

ABSTRACT OF THE DISCLOSURE

In a device for electro-deionization (EDI) in the demineralization of aqueous solutions, which device includes ion exchange membranes arranged alternately and in spaced relationship so that between the membranes compartments are formed of which at least some are filled with cation and anion resin exchange particle fractions forming a mixed bed ion exchanger, the ion exchange resin particles of one of the two fractions include a magnetic material and a magnetic field generator is provided for generating a field for orienting the magnetic resin particles and arranging them in parallel chains extending between the membranes.